Fever
Dr Chapman billious

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No. 1

A dissertation on the Bilious remittent fever, as it appeared in Georgia, in the months of August & September.

The State of Georgia extends from North to South about 300 Miles, and from East to West, about 240. a very large tract of country containing an area of more than 37,000,000 acres of land, much diversified as to elevation, fertility and salubrity. It lies between the parallels of 30° 42" and 35° North latitude which will necessarily give it many advantages as to climate and productions, but at the same time will expose it to suffer from the diseases which are prevalent in warm climates, especially if these diseases are invited by peculiar circumstances of situation. The whole State may be, and generally is spoken of as divided into the upper and lower country, a very proper distinction which nature herself has pointed out, for about one half, (the Northern division) of it is agreeably diversified with hills and valleys and rapid streams; the other (the Southern) is generally a plain descending pretty regularly to the sea-coast and covered almost entirely with the uniform and melancholy pine, a circumstance which has caused much of it to be denominated, "the pine barrens;" It is principally to this

lower section that the violent attacks of remitting fevers are confined, and I shall be understood as speaking of this section in my dissertation.

In the months of August and September the inhabitants of the middle and lower countries of the state, are very liable to attacks of fevers assuming a variety of external characters, yet generally coinciding in one prominent feature (viz.) in being connected with disordered functions of the Hepatic System. In truth, so general is the predisposition to this morbid condition of the liver, that few cases occur of any character which are not more or less evidently impressed with this great Endemic Seal.

Imprudent exposures to cold, improper indulgences in food or drinks and too long continued subjection to the burning rays of the Sun, and even many accidents are capable of evolving the symptoms, at this season, of the Bilious remittent fever.

It is probably in a great measure owing to the general level of the land in the middle and lower

countries that much of this disease is to be witnessed in that section, and it is likewise owing to the altitude of the upper sections that they are more exempt from the same unhealthy influence. It only requires a glance at the Geological map of Georgia to see that the rivers and creeks which are very numerous, must have a very tardy and sluggish course towards the Ocean after leaving the high lands of the State which generally lie to the Northward of 35° 30". The level and plain face of the country, and its trifling elevation above the surface of the Sea, the almost total absence of rocks and torrents, indicate a region, the banks of whose rivers are necessarily subjected to extensive inundations when ever the wet seasons advance, and consequently a great deal of marsh lands and stagnant water might be looked for. This is the case. Abundant occasion is therefore given for the production and rise of Miasmatic exhalations. On the banks of many streams, there are a great number of acres sometimes extending laterally for miles, which, once or

twice a year are covered with water resting on the decayed bodies, branches and leaves of the dead forest trees. These acted on by a sun as powerful, perhaps, as if it were actually vertical, give out an abundance of the fomites of fever. When in addition to these circumstances we are led to contemplate the manner of living of the inhabitants, we can be at no loss to believe that abundant distress must visit them annually.

Perhaps the thermometer does not often range much higher than in the latitude of Philadelphia, yet from the long and persevering continuance of the heat and a peculiar indescribable oppressiveness which accompanies it by the end of August, almost all the citizens begin to show by their gait, their expression of countenance and by their own confession, a considerable degree of relaxation and langour with loss of appetite, an unaptitude to the more active species of exercise and a general disposition to repose during some part of the day. This condition of the frame, once es-

tablished, not only exposes it to, but, wiu invites the agency of morbific causes.

From the universal earnestness to engage in the lucrative culture of the staple commodity of the State, cotton and rice, less attention is of course paid by the great mass of the people to the growth of such herbs and fruits as are the most important part of the business of a farmer. Hence the consumption of animal food is very considerable among the citizens, and from the general state of the Market which do not attract the attention of a planting, so much as a farming people, they must of necessity consume a large quantity of salted meats. Every head of a family therefore tries to lay up in his smoke-house, as much of bacon as will serve him with occasional admixture of poultry &c. the whole spring, summer and fall for a daily dish in one shape or another. There is no question that this bacon is one of the most delicious and palatable viands, and that it is a wholesome one also; but it is unquestionably not so well adapted to support a constitution labouring under

external stimuli of such power as the heat and miasmata to which they are so long exposed, they would do better to eat more vegetable and less animal food.

These are among the circumstances which may be mentioned as rendering the Southern people so liable to attacks of disease. I need not enter into an extensive essay on the reasons why the diseases should so generally assume a bilious character, simply mentioning my opinion that the large volume of the organ (liver) the intricacy of its structure, and the remora which the blood is liable to in such a complex apparatus lays it open to frequent derangements of functions in consequence of frequent and repeated accumulations of blood in its vessels constituting an inequality of its distribution. These circumstances subject it again to be oppressed in circumstances of violent arterial excitement.

Generally after exposure to the rays of the mid-day sun, or to the chilling influence of the evening air the patient percieves a qualmish state of the

stomach with uneasy sensations across the forehead, the back of the neck and upper part of the dorsal portion of the spine. These are generally simultaneous with more or less sense of chilliness, pains of the loins, thighs and legs, a disposition to stretch and yawn and sometimes frequent inclinations to evacuate the urinary bladder.

Such a condition as the one described, often continues a day or two before a general reaction takes place, which is oftentimes preceded by a more distinctly marked chill; at other times, this condition is gradually succeeded by a violent reaction which is indicated by a full, voluminous, and strong pulse, beating from ninety to one hundred strokes in a minute. There is a violent pain in the head with a sense of throbbing of the temporal arteries, pains in the spinal part of the back of an insufferable and agonizing discription, the face is flushed and turgid, the eye balls move with difficulty, and pain in their orbits with a great intolerence of light. This state may

or may not be accompanied with vomiting, sometimes with an obstinate refusal in the part of the stomach to retain the smallest portion of fluid or solids, as in Gastritis, these being rejected as soon as swallowed accompanied with much pain. The last mentioned circumstance occurring only in the more violent cases, the bowels are constipated most generally. The bile thrown off may be either green or yellow and often thick like the white of eggs. Such a condition after continuing from five to eight hours declines with some moisture and general remission of the symptoms leaving the patient to a repose from which he is awakened to go through the same round of suffering.

Such is the ordinary character of the disease, but under different circumstances of situation and constitution of the patient it assumes different appearances. It is generally a disease of an increased action, requiring active antiphlogistic remedies.

Treatment. Called to such a case as this, our first object should be to induce a diminution of arterial action. The symptoms very clearly point out the method of treatment. The hot dry skin and determination to the head which tends to produce a comatose state of the patient, together with a variety of others cry aloud for the lancet and its auxillaries. To use it sparingly will be to endanger the life of the patient; used boldly and with judgement, the pain will be relieved and the symptoms in general much mitigated.

The next remedies demanding our attention, are emetics; of these, there are a great variety, but the best in these cases is the Tartrite of antimony. It more completely evacuates the stomach of its billious accumulation, and at the same time makes a more powerful impression on that organ. It is a fact that this impression is sometimes so great that it completely eradicates the morbid action already commenced in the stomach, a circumstance, the

knowledge of which cannot fail to entitle it to our greatest attention in this disease; Ipecacuanha will evacuate the stomach yet it will not prove such a valuable remedy in our hands when applied to this disease, because it does not make that healthy impression which we ascribe to Emetic Tartar.

In detailing the symptoms, I mentioned that there was a great disposition in the bowels to a constipated state. In the treatment of one case which came immediately under my direction, I resorted to a Calomel purge to overcome this constipation, but it proved unsuccessful even after using injections as auxiliary measures. I ultimately succeeded most readily by giving a decoction of senna and manna which produced some evacuations. I again resorted to Mercury which thoroughly opened the alimentary canal. Calomel has a superiority over the rest of the cathartics, depending on its extensive influence

over the liver which is so much involved at this time in a morbid action. After sufficient purging we must use more mild cathartics, such as the Sulphate of Soda or Magnesia which keep the bowels in a soluble state, a condition universally granted to be very important at this stage.

After accomplishing these objects, we resort to such medicines as determine to the surface of the body, and shall be most successful if we use the milder methods of diaphoresis, such as the antimonial preparations, the Neutral mixture, spirits of Mindererei or acetate of ammonia: their action is to be promoted by the vapor bath which is made by pouring vinegar on hot bricks wrapped in flannel. These are to be placed to the extremities, arm pits and trunk of the patient.

The disease under this mode of treatment, will most frequently yield in four or five days, but should it not, we give an emetic again and mercurial purges; evacuants of this kind are called for

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by the accumulations of bile in the stomach whereby irritation and febrile action is kept up. As co-operating remedies, we apply blisters to the ankles and wrists. Their beneficial operation is perfectly intelligible by referring it to the strong impression they make on the skin, by that means intercepting that train of action which constitutes the febrile condition. During the course of this fever, there are subordinate affections which merit our attention. There is great heat on the surface which is remarkably oppressive; when this is the case, the most general practice is to sponge the body with vinegar or water; This practice has been found very successful in the Pennsylvania Hospital, for by this means we reduce the temperature, allay irritation and render the patient much more comfortable.

Again, there is a determination to the head in this fever which is indicated by a flushed face, wild expression of the eyes, a tendency

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to delirium. Cups and leeches at a time like this, exercises their beneficial effects in a very eminent degree. Apply cold water in bladders or cloths wrung out of cold water. If, after this, there remains any delirium, shave the head and apply a large blister, let it remain untill some sensible effect is produced or as long at least as fortyeight hours.

There is one other symptom which was formerly mentioned, that claims our particular attention and one that calls urgently for relief. Most commonly during the continuance of this disease, there is nausea and vomiting of bilious matter arising from bilious accumulations or from a peculiar irritability of the stomach. To carry off the first, we give an emetic. To fulfill the second indication, we administer such remedies as shall quiet that organ. When irritability arises from a want of tone, we give the tincture of cloves, when the vomiting is violent, use the warm bath, sinapisms

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to the extremeties and a blister over the region of the stomach. I have seen this succeed when all others have failed, and it was only after this was applied that we could resort to other internal remedies as auxiliaries. Among the remedies which are calculated to stop the bilious vomiting, is Opium, we should prefer an old pill that has been made four or five weeks; it remains better on the stomach and more readily imparts its beneficial effects, but should it be rejected, we may then use an injection of laudanum or a suppository of opium which can be removed when the symptoms demand it.

We have by this time altered the type of the disease and it assumes other symptoms that demand a different treatment. It does not come under the view I have taken of this subject to enter into an investigation of the treatment after it has assumed an intermitting character; it is then treated as an intermittent fever. While

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I am on this subject, I will remark one word further. In intermittent fever where you wish to prevent the recurrence of a paroxysm, I have never seen any composition more effectually answer your design than the following. ℞. ℥j of virginia snake root pour on it one pint of boiling water to which add eighty drops of laudanum and eight grains of Ipecacuanha. This universally produces perspiration and prevents the paroxysm. One fourth of the mixture is to be given a quarter of an hour before the expected attack: the same quantity, half an hour after the first dose &c. pro re nata.

To shew the distress occasioned by this disease, I will here introduce some facts collected from the report of the secretary of the Georgia Medical society.

Heath of Savannah.

Report of the secretary of the Georgia Medical society. Sept. 29th. 1818. The sexton has registered

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twenty three deaths for the present month and twelve for the last fourteen days; six of these resulted from bilious fever. There have been fifty eight cases of bilious fever, of these fifty eight cases forty three were remittent and fifteen intermittent. Forty four cases are still pending. The severity of the bilious fever has been somewhat aggravated within the fortnight, though it would not be entirely correct to denominate the type as violent or malignant. Since the last report, twenty two deaths have taken place; of this number fourteen were the effects of bilious fever, one of old age and five of maladies not ascertained and two of inflammations. This statement is officially correct though it is true that not more than nineteen deaths have occurred in the city, three of the twenty two having taken place in the country. Of the fourteen deaths by fever, seven occurred in the hospital and ten among the seamen, so that in regard to the fatality of the disease

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our resident population, seem to have sustained but a very minute portion of its effects. Thirteen of these nineteen deaths by disease, had their formation in the northern border of the city, one on the South common, one in carpenter, row, one on springhill and three in the interior part.

During the fourteen days, ending on the tenth of the present month, Seventy four cases of bilious fever have occurred; of these, fifty-one were remittent and twenty-three intermittent. The character of the disease, in many of the cases above enumerated, has been predominantly bilious, and on that account they have been comprehended in the number of those purely endemic; but in addition to this feature, they have been inflammatory, with an evident determination to the head or chest and exhibiting the influence of cold in cooperation with miasmata.

It is not probable that the bilious cause

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has acquired any increase of quantity in the present fortnight notwithstanding the extended effects. Our weather has been so sensibly bracing to the population at large, the common nurseries of disease in the neighbourhood have retained so generally the favourable condition which they occupied in the earlier parts of the season, that nothing of this kind can be imagined. Our city is at this time unusually healthy. A face blanched or impoverished by fever is rarely to be observed in our streets and disease is not as heretofore, the monopolizing subject of interest at this period of the year.

Thus, I have brought this dissertation to a close in as laconick manner as was desirable. Should it, together with my acquirements, meet your approbation, I rejoice that I have waded through the crystal stream of science with success; but should it not and the unfortunate seal of disapprobation be by you prefixed, I will acknow-

ledge your justice, and lament my incapacity. Be this as it may, I embrace this opportunity (as no other more proper) of tendering my sincere respects for your energetic exertions for my promotion in the science of medicine; and may you support and defend my mater alma from the shafts of envy and the fangs of intrigue.